

# U.S. NAVY MEDICINE

January-February 1984



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*U.S. NAVY MEDICINE* is published from appropriated funds by authority of Department of the Navy, Naval Medical Command, in accordance with Navy Publications and Printing Regulations P-35. Second class postage paid at Philadelphia, PA, and additional mailing offices. ISSN 0364-6807. Articles, letters, and address changes may be forwarded to the Editor *U.S. Navy Medicine*, Department of the Navy, Naval Medical Command (MEDCOM 00D4), Washington, DC 20372. Telephone (Area Code 202) 653-1237, 653-1297; Autovon 294-1237, 294-1297. Contributions from the field are welcome and will be published as space permits, subject to editing and possible abridgment.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

NAVMED P-5088

**POSTMASTER:** Send change of address orders to U.S. Naval Publications and Forms Center, ATTN: Code 306, 5801 Tabor Avenue, Philadelphia, PA 19120.

# U.S. NAVY MEDICINE

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**COVER:** HM2 Bob Boyles quizzes third-year medical students on the names of surgical instruments at the Uniformed Services University of the Health Sciences. Story on page 4. Photo by SP5 Joe Brown, USA.

# Our True Worth

Recently, walking through one of our Navy treatment facilities, I met one of the staff—a Medical Department officer and physician. As we passed within several feet of each other, I looked at him directly and said, "Good afternoon." He neither spoke nor acknowledged in any way my greeting or my presence.

That incident has continued to bother me, not because of the very slight personal affront, but because I have to wonder if his insensitivity is perhaps reflective of an all too frequent problem with health care professionals and our entire health care system.

In the last 25 years the face of medicine has changed dramatically and drastically. In that time our diagnostic capability has expanded in a manner which could hardly be anticipated. Our understanding of chemistry, in all its aspects, has allowed the development of a therapeutic armamentarium giving us the ability to influence the course of illness and to affect and improve the quality of our lives. From everything we see, the strides and advances in the next 5 years will be as startling. Unfortunately, these advances and the ever increasing com-

plexity of the administrative system which supports them have combined to produce an environment in our treatment facilities that is more and more sterile, dehumanized, and frightening. Is it any wonder that our patients often find fault with our failure to demonstrate that we recognize that they are still people, that *we care*.

To turn around the perception could be an easy thing. The physician who failed to speak must recognize that his greatest therapeutic strength is in his smile and a kind word. Our nurses and corps personnel must realize that a gentle word of explanation will allay fear and apprehension. Our administrative personnel should learn that systems must be designed and managed for the benefit of those we serve rather than for ease of administration or our convenience. In other words, the real future of Navy medicine is us—not our diagnostic capability and not our therapy—but in the care, help, and hope we can offer. The next time, doctor, please speak to me.



*W. M. McDermott, Jr.*

William M. McDermott, Jr.  
RADM, MC, USN



# Minesweeper Corpsman

His 6- by 8-foot compartment isn't much but HMC Larry J. Brink calls it sickbay aboard USS *Adroit*.

Brink is the only medical person assigned to the oceangoing minesweeper based at the Naval Amphibious Base, Little Creek, VA, and admits, it's a big job. *Adroit* is a Naval Reserve Force ship with an active duty crew of 55.

"It's as independent a duty as you can get," says the 15-year Navy veteran. "You use everything that you have ever learned on this ship. If someone gets hurt or sick when you're on an operation, you just can't drive the guy to the hospital."

With the limited space in the sickbay Brink often has to make do with the ship's other spaces. "If someone is really sick I bed him down on the extra bunk in the chief's quarters so I can keep an eye on him."

Although the sickbay is small it is well stocked with medications, minor surgery kits, splints, bandages, reference books, and lab equipment, including a microscope.

Aboard the 28-year-old ship, Brink has much more to do than just treat the sick and injured. He runs the safety, preventive medicine, and pest control programs, acts as counselor, and is the collateral duty operations officer.

"Safety and preventive medicine are my biggest responsibilities," says Brink. "Knowing the environment in which you are going to operate is a help." Some of his major efforts involve heat stress, hearing conservation, and asbestos surveillance. He has also instituted a first aid and CPR course for all crewmembers.

For heat stress, Brink monitors the



*HMC Brink removes stitches from a crewman's back after minor surgery had been performed in Norfolk . . .*

temperature in the galley, scullery, and engine rooms. Temperatures often exceed 115° in these places. "Using a special gauge I can get the wet and dry temperatures," he explains. "Then, I follow a heat flow chart that tells me how long men can work in these spaces before they need a break."

Brink also watches for people who do not wear the proper protective gear when working in high noise level spaces or around asbestos. Conducting weekly tests for bacteria in the ship's water holding tanks is another important responsibility as is the testing of chlorine levels in the water system.

When the ship is on a sweeping operation his job gets more hectic. "During sweeping operations I serve as safety observer. There are a lot of live wires and sweep cables, explosives and cutting devices on deck and a big potential for accidents," Brink points

out. One safety violation during their sweep evaluations means the ship flunks its qualifications.

*Adroit's* corpsman finds all aspects of his job important, even killing bugs and insects. "Pest control is a problem on these wooden ships," he says, "especially cockroaches. They get in the bulkheads and are hard to get out."

Prior to reporting to an independent billet like *Adroit* all corpsmen attend independent duty school where students are given intense courses in hematology, lab work, shock/trauma, and medications.

Brink spent most of his career with the Marines and at naval hospitals before his tour aboard *Adroit*. He finds it interesting and exciting. "There's no help out here; you have to do it all yourself." □

—Story and photos by JOC Rich Beth, Naval Reserve Readiness Command Region Six, Washington, DC.

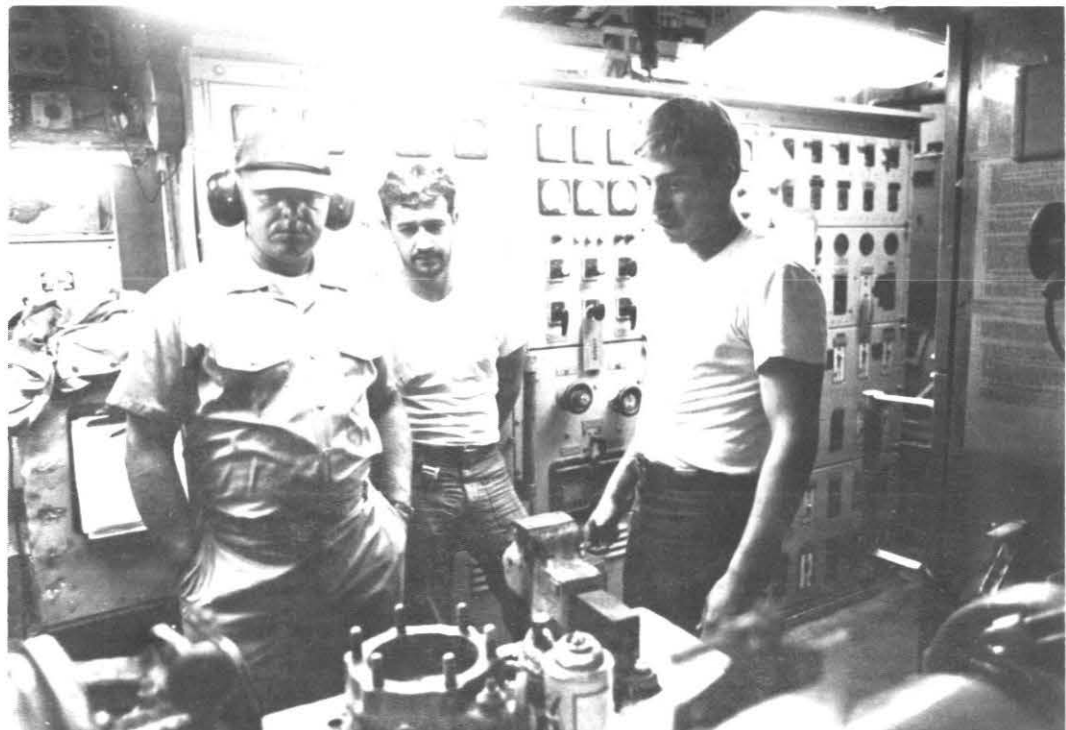




*USS Adroit*



*. . . checks the temperature in the main engineroom . . .*



*. . . and (left) looks in on the forward engineroom and power generating station on the USS Adroit.*

# OR Techs Operate in Unique Environment

Patricia A. Campbell

It's the first day of the 1984 spring semester at the Uniformed Services University of the Health Sciences (USUHS) in Bethesda, MD. Forty third-year military medical students assigned to surgical or OB/GYN rotations begin the morning in the University's Department of Laboratory Animal Medicine (LAM). An instructor, one of five who will be teaching that day, stands before the students and demonstrates the types of surgical caps, gowns, and drapes they may encounter at the hospital, warning them how this paraphernalia may unwittingly be contaminated. Later, the instructors will correct the students' efforts to scrub, gown, and glove themselves and fellow students, and will teach them proper instrument handling and basic surgical techniques in one of the Department's operating rooms.

From the preceding description, one might think these teachers were members of the University's eminent faculty. Although faculty surgeons from the Departments of Surgery and OB/GYN do participate in the lab, the above-mentioned instructors are actually Navy operating room technicians. They are part of a unique teaching program in which medical students learn and practice basic surgical techniques, not once, but several times

before their actual rotation, and under conditions that recreate an authentic hospital operating room, only the "patients" are anesthetized animals instead of humans. This is a very different training experience. The majority of students usually get their surgical orientation on the first day of the rotation itself, meaning that many do not even know how to scrub.

It should not be surprising that such an original program would come from USUHS, itself a unique institution. Created by Congress in 1972, the University's primary goal is to prepare men and women for careers as medical officers in the uniformed services of the Navy, Army, Air Force, and the Public Health Service. It offers students more than just a sound medical education. Because the Hébert School of Medicine's primary objective is to produce dedicated medical officers for the four services, military training and medical programs in areas such as tropical medicine and applied military physiology are an integral part of the curriculum. The basic surgical skills program, which employs Navy OR techs, is just one of many innovative forms of teaching unduplicated at other medical schools in the country.

As the program is one of a kind, so is the job of the OR tech at USUHS. To be chosen for a billet there is exceptional, explains HM2 Bob Boyles, a 3-year veteran of the Department of Laboratory Animal Medicine, who along with HM3 Cheryle Wood, HM3



Michele Wisniewski (both 1 year of service), HM3 Randy Olmstead (8 months), and HN Christopher Johnson (4 months) comprise the current OR tech team.

"First of all, OR techs have to interview for a billet here, which is very unusual in itself," Boyles points out. "The present techs, as a group, interview prospective techs, who are top students in their classes. The group then votes, along with MAJ James Nichols, DVM, USAF, chief of the Division of Veterinary Surgery, on whether to accept the tech here." Adds HM3 Olmstead, "During the interview, we try to discourage people from coming here. That may sound a bit strange, but we do this because we only want techs who really want to be at USUHS. The job is so different. Here we are involved with animals *and* humans."

If a tech is accepted, he or she must next complete instructor school. Almost 50 percent of the tech's job will be to teach second- and third-year medical students.

Ms. Campbell is public affairs specialist at the Uniformed Services University of the Health Sciences, Bethesda, MD 20814.





*HM3 Wood shows students the proper placement of surgical instruments.*



*Third-year medical students learn how the operating room circulator assists the surgeon in gowning.*



*HM3 Wood demonstrates the proper unfolding of a surgical gown (left) while HM3 Wisniewski (right) insures that aseptic techniques are followed by students acting as operating room circulator (second from left) and surgeon (third from left).*

Photos by SP5 Joe Brown, USA



*HM3 Olmstead corrects student's improper hand-scrubbing technique.*

And what do they teach? "How to put on OR greens, how to scrub, how to gown and glove, what the basic surgical instruments are (technicians learn more than 380 of them in tech school), how to tie surgical knots and suture patterns, how to use good surgical techniques, and an orientation to the operating room," HM2 Boyles says.

Students in their second year receive 4 hours of lecture and two 3-hour labs. One lab, which concentrates on the above-mentioned skills, is entirely taught by the OR techs.

Third-year students spend the first 2 days of their general surgical rotation and half a day of their OB/GYN rotation reviewing the basic surgical skills they learned as second-year students. They then do actual surgery under the supervision of leading surgeons and the techs. This lab is held eight times a year.

"What we're trying to do is to get the students relaxed in the operating room so when they are on their rotation, they can concentrate on surgical procedures and not on the basics of surgery," HM3 Wood points out. "As enlisted personnel teaching officers, we are in a special position. We must do a good job of teaching, yet at the same time we must be tactful and diplomatic in correcting student mistakes."

Another important component of the techs' job is the surgical assistance they provide the University's researchers. Because many investigators are Ph.D.'s or M.D.'s with limited surgical experience, in most instances the OR techs perform the surgery, which is something techs stationed elsewhere would never get the chance to do. As HM3 Wisniewski puts it, "Very little of the OR work we do at USUHS is standard OR tech work; we do

research surgery and teach medical and graduate students."

This is echoed by MAJ Nichols, who adds, "OR techs at USUHS are more than instrument-passers. They learn other jobs, including those of veterinary technician, pharmacy technician (techs are responsible for all veterinary drugs used for the animals), anesthetist, and X-ray technician. They even learn public relations and how to deal with young and senior officers and the many distinguished international visitors who come to the Department to observe our research and teaching methods."

Another distinctive aspect of the tech's job is their work with animals. "Human OR techs work with only one species of patient. Here we deal with 22 species. This adds to our knowledge of anesthesiology, physiology, and anatomy," says HN Johnson. Adds HM3 Wood, "Because we attempt to recreate the human hospital setting, we refer to the animals as patients. I think of them as patients."

For the Navy OR techs, the rewards of working in this unique environment are "immense," according to HM3 Olmstead. "You are allowed to use your imagination, to express yourself in teaching and in research. You have to figure out your own type of approach. And, how many OR techs teach medical students about surgery?" There is also the chance to study with some of the country's finest surgeons. "The opportunity to increase our surgical skills is made possible by working with such internationally-known surgeons as Dr. C.G. Rob, the renowned vascular surgeon, Dr. Harris Schumacker, author of numerous surgical texts, and LGEN Paul Myers, retired Surgeon General of the Air Force. Few medical students, much less OR techs, ever get the chance to learn from physicians of this caliber," says Boyles.

HM2 Boyles and HM1 George Morris, a tech who has already completed his 3-year USUHS tour, also contributed to a textbook, *Basic Surgical Skills* (now in its second edition) written by MAJ Nichols and which



accompanies the course. Attempts are currently being made to get the text into the public domain so it can be used by other medical schools.

When asked what the course participants think of the basic surgical skills program and the OR techs' contribution to it, MAJ Nichols replies, "Students love the experience. Ninety-nine percent of them respond favorably to the evaluation questionnaire they fill out at the end of training, and the other one percent thinks the course needs to be 3 days instead of 2. The OR techs' participation is a big part of the reason for that response." ENS Mark Clapper, currently a fourth-year student, agrees. "It's a really good program. It makes you feel more confident your first time in the hospital operating room."

COL Richard Simmonds, DVM, USAF, director of Instructional and

Research Support at USUHS and former director of LAM, was responsible, along with Dr. William Wilson, a veterinarian now in private practice, in setting up the basic surgical skills program in 1976. "Dr. Wilson and the first OR tech worked superbly together and laid the foundation for what I think is an exemplary program," COL Simmonds says. He adds, "I selected the Navy to provide us with OR techs because their techs are very highly trained. We at USUHS have been exceptionally pleased with the quality of the people and the significant contributions they have made to our teaching and research programs."

With all the extra training USUHS techs receive, the question naturally arises of "Where does a tech go from here?" This is especially important because the USUHS billet is most often a tech's first assignment after

OR tech school, and reassignment to a human hospital billet afterward would seem to end up being fairly dull by comparison. Fortunately, the USUHS techs have plans for upward mobility. If the successes of the three previous techs are assessed (one is in physician's assistant school, another is going to independent duty tech school, and one has completed a bachelor's degree in health care administration and is presently employed in the private sector), current techs shouldn't worry too much about the future.

HM2 Boyles knows exactly what he wants to do when his tour ends in 1985. By then he will have completed the bachelor of science degree he is working on at night, and will have applied to enter the University's School of Medicine in September 1985.

HM3 Wisniewski says, "It would be boring to have to go back to doing regular OR tech work. I wouldn't be able either to act as an assistant surgeon or do the procedures myself." She is also planning to enter medical school and eventually wants a career in sports medicine.

HM3 Wood, who also attends school in the evening, plans to apply for physician's assistant school when her tour is over.

Since HM3 Olmstead will be assigned to USUHS until 1988, he hasn't yet formulated any future career plans. He is, however, taking advantage of military training opportunities not normally open to OR techs unless they are billeted at the University, such as the Army Expert Field Medical Course he and HN Johnson will be attending in the near future.

As for HN Johnson, although he has worked at USUHS only 4 months, he easily sums up the feelings of the other Navy OR techs: "The experience here is what you make it. You have to learn a lot of things that aren't in basic OR training; you wear a lot of hats. If you stay in the Navy, this is probably the most career-enhancing experience the service has to offer." □

Photo by ENS Robert Lynch



HM2 Boyles demonstrates the correct procedure for tying surgical knots to second-year Navy and Air Force students.

# Armed Forces Medical Intelligence Center

## What Can It Do for You?

LT Sue E. Steven, MSC, USN

Imagine yourself a senior medical officer landing with a Marine Amphibious Unit in Lebanon. You wonder what to expect: What diseases are endemic? What diseases occur sporadically? What fixed medical facilities or alternate facilities are available? How hot does it really get?

Perhaps you are assigned to a preventive medicine team deployed to aid residents of the island of Fiji following a severe cyclone. You need to know what potable water systems (which

may have been damaged) exist, what quantities and types of medical materiel the country has stockpiled, and what diseases exist that may be compounded by the effects of a natural disaster.

You may be a medical planner updating an OPPLAN and you want to know: How will terrain and climate degrade medical equipment and the health and performance of deployed personnel? What are the optimal routes and methods for evacuating casualties from this theater of operation?

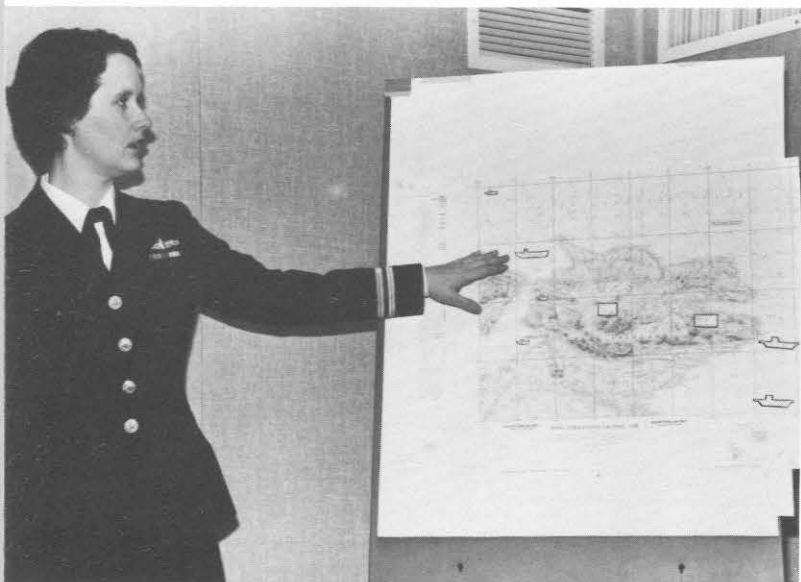
Finally, consider yourself a research investigator developing prophylactic drugs against chemical warfare

agents. You ask: What new chemical agent antidotes have been developed by foreign countries?

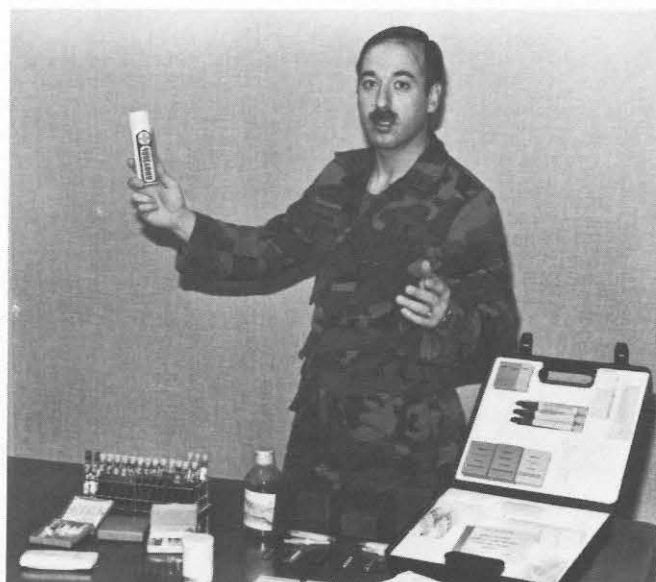
Answers to these questions, and more, may be obtained from the Armed Forces Medical Intelligence Center (AFMIC) and their intelligence publications. AFMIC, a recently established tri-service organization, is the successor to the former U.S. Army Medical Intelligence and Information Agency (USAMIIA). It has been providing medical intelligence to the Army, Navy, and Air Force since 1941. AFMIC is the sole medical intelligence production center for the Department of Defense (DOD).

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LT Steven is an intelligence research analyst assigned to the Armed Forces Medical Intelligence Center, Fort Detrick, MD 21701.



*The author briefs Navy medical flag officers during the Falklands crisis.*



*CAPT Vince Mennito, MC, USA, describes a foreign aerosol bandage.*



## Medical Intelligence

Medical Intelligence can be defined as products resulting from the collection, evaluation, and analysis of information concerning the medical aspects of foreign countries which have immediate or potential impact on policies, plans, and operations.

There are several important aspects of this definition. Collected information does not become intelligence until it is analyzed and evaluated by competent individuals. Consequently, AFMIC employs analysts who range in expertise from bacteriology to veterinary medicine. A key word in the definition is foreign. Medical intelligence cannot be produced on U.S. forces or the United States and its territories. Lastly, publication of medical intelligence is driven by consumer requirements or needs.

## A Dual Role

Understanding AFMIC's responsibilities in the intelligence production cycle will give you, the consumer, a better picture of what this organization can do and how it can best serve your unit. AFMIC is not only tri-service, but also has the dual role of following the established intelligence community procedures while serving the medical community's needs. As such, it must coordinate all its efforts with the three Surgeons General, the intelligence chiefs of the three armed services, and a Defense Intelligence Agency (DIA) representative as well. AFMIC maintains a delicate balance; reports must be general enough so they can be understood by the intelligence layman, but detailed enough to be technically accurate and trusted by the medical consumer.

## Mission and Organization

The primary mission of AFMIC is to:

- Maintain DOD data bases on medical intelligence.
- Produce finished intelligence products in response to validated consumer requirements.

## Intelligence Community Acronyms

<b>IPR</b>	- Intelligence Production Requirements. Consumers use this form to request the production of a study.
<b>ICR</b>	- Intelligence Collection Requirement. Each ICR lists questions the collectors (USDAO's Service Units and Teams, etc.) are responsible for answering in order to support a specific intelligence need of short-term duration (usually within 1 year or less) or one-time interest that cannot be satisfied from existing intelligence holdings.
<b>CIR</b>	- Continuing Intelligence Requirement. Same as an ICR, except it supports a specific intelligence information need that is continuous, repetitive, or semipermanent in nature.
<b>IR (or IIR)</b>	- Intelligence Information Report. Generally raw unevaluated information from the USDAO to answer a portion of an ICR.
<b>SDR</b>	- Source Directed Requirement. A list of questions directed to a single source or individual with knowledge on a particular subject (used most often with emigres).
<b>USDAO</b>	- U.S. Defense Attache Office (located worldwide)
<b>NIC</b>	- Naval Intelligence Command
<b>DIA</b>	- Defense Intelligence Agency
<b>CIA</b>	- Central Intelligence Agency
<b>NSA</b>	- National Security Agency
<b>S&amp;T</b>	- Scientific and Technical
<b>GMI</b>	- General Medical Intelligence
<b>SSO</b>	- Special Security Officer
<b>SCI</b>	- Sensitive Compartmented Information. (Often called "codeword" information; requires an SCI clearance.)
<b>SCIF</b>	- Sensitive Compartmented Information Facility

- Publish a *Weekly Wire* of current medical intelligence items.
- Provide briefings and "quick reaction" responses as required.
- Administer the Foreign Medical Materiel Exploitation Program.

To support this mission, AFMIC comprises five divisions: Operations and Administration, Collection and Requirements, Information Services, Automation Management, and Studies and Analysis (S&A). The first four divisions are responsible for supporting the latter, which is the production center of AFMIC. In addition, there is a colocated Special Security Detachment which provides compartmented (codeword) information support.

### Medical Intelligence Production

The Studies and Analysis Division is staffed by analysts who are assigned specific geographic areas of the world and/or scientific and technical discipline in which they follow events relating to medical intelligence. Significant events are reported and analyzed in the *Weekly Wire* as they occur. A more significant amount of analytical effort is devoted to the production of major studies in direct response to consumer requirements. To prepare a major study the analyst can access over 200 commercial, defense, and intelligence data bases (support pro-

vided by Information Services Division), task the U.S. Defense Attachés and other collectors worldwide to gather specific medical information (support provided by Collection and Requirements Division), and coordi-

nate with other U.S. and foreign intelligence agencies to obtain data. Not infrequently, despite vast networks, information gaps continue to exist. These are identified in the completed study in order to make the consumer

### Why Classify It?

Many countries are not as open as the United States in publishing disease statistics, hospital locations, or the numbers of physicians practicing in-country. Thus, many of AFMIC's publications are classified in order to protect sources who obtained the information. Classifications used are generally Confidential or Secret, and less often Top Secret. Frequently, other restrictive caveats may be assigned to publications that are not known to many consumers. These include:

<b>NOFORM</b>	- Not Releasable to Foreign Nationals
<b>WNINTEL</b>	- Warning Notice: Intelligence Sources and Methods Involved
<b>NOCONTRACT</b>	- Not Releasable to Contractors or Contractor/Consultants
<b>PROPIN</b>	- Caution—Proprietary Information Involved (must be used with NOCONTRACT)
<b>ORCON</b>	- Dissemination and Extraction of Information Controlled by Originator
<b>REL (specific country)</b>	- This information has been authorized for release to (specific country)

A more complete description of each control marking is contained in DIAM 58-2J, 4 Feb 1980.



*Jean Eustice displays the most reliable means (at present) for storage and retrieval of documents.*



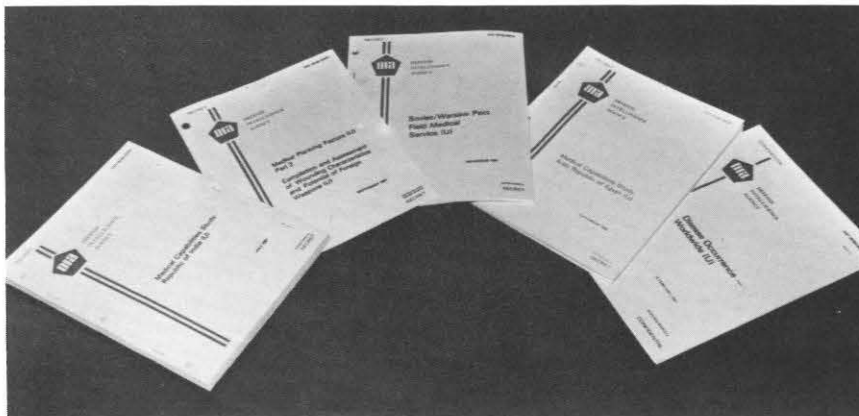
*Bev Miller searches a commercial data base to support an analyst's requirements.*

equally cognizant of the intelligence presented or missing in any publication.

## Intelligence Process

How do you, the consumer, employ this intelligence process to meet your specific medical requirements? First, you determine if your requirements can be satisfied by existing AFMIC medical intelligence publications which, if not held at your command, may be available from the EPMU's, fleet medical offices, COMNAV-MEDCOM, or other medical offices in your chain of command. If significant requirements remain unanswered, then you can submit an Intelligence Production Requirement (IPR) (DD Form 1497) in accordance with DIA's guidelines as set forth in the Intelligence Users' Guide (DDM-2600-397-78). This IPR, once validated by Naval Intelligence Command and DIA, becomes a formal task for AFMIC and is assigned to an analyst with the subject expertise. Once the study is complete, AFMIC assists DIA in identifying interested consumers (in addition to the originator) and the study subsequently is disseminated by DIA.

Unfortunately, this process of tasking, collecting, evaluating, analyzing, publishing, and finally disseminating intelligence to the requestor often takes years to complete. Consequently, a shorter, more responsive procedure has been established called the Quick Reaction (QR) process. Any Army, Navy, Air Force, Marine Corps, or other Federal agency can call, write, or message AFMIC directly requesting specific intelligence support which will require less than 5 man-days to prepare a response. The response can be in a variety of formats as well, either in writing (monograph, message, or letter) or verbally (telephone call or formal briefing). The QR process not only provides the consumer with the most current intelligence on a specific topic, but also allows AFMIC analysts to receive feedback on changing consumer interests.



*AFMIC publishes studies under a DIA cover.*

## Publications and Studies

AFMIC publishes (under a DIA cover) a variety of studies, some are a continuing series covering various areas of the world and updated periodically, and others address a single topic on a one-time basis. The studies can be grouped into two categories: GMI or S&T. AFMIC's most popular publications are described below. (Note: Some of these studies are being integrated into the Shipboard Microfilm Library.)

### Medical Capabilities Study (MEDCAP)

These studies are written on a single country or a small geographic area and are divided into several chapters. These chapters attempt to describe the medical capability of that country and discuss epidemiology, medical facilities, military medical services, medical R&D and materiel capabilities, public health services, and environmental factors. MEDCAPs have been completed on 95 percent of the world's countries and are updated no less often than every 5 years.

### Health Alert and Threat Summary (HATS)

The HATS is a single volume unclassified text which provides a two- to three-page summary and a map of each country worldwide. Four topics are discussed, especially as they relate to military operations. They include climate, epidemiology, fauna, and medical evacuation.

### Disease Occurrence Worldwide

This is a monthly publication which summarizes outbreaks of diseases of military importance, worldwide.

### Navy Port Directory

AFMIC now provides the medical section input to this six-volume directory published by the Fleet Intelligence Centers.

### Weekly Wire (WW)

This is a weekly summary of current medical intelligence items on a variety of subjects. It is published in message format and is received by over 340 commands. Commands not on distribution can request the *Weekly Wire* by calling AFMIC.



## Foreign Medical Materiel Exploitation

Medical intelligence encompasses not only information analysis but also materiel exploitation. The process of acquiring, evaluating, and reporting on foreign medical materiel is called the Foreign Medical Materiel Exploitation (FMME) program.

The FMME program is managed by the Collection and Requirements Division. Within the intelligence process, collectors report on the development of a new drug, piece of equipment, or other medical materiel used by a foreign country. AFMIC subsequently queries consumers to determine if the materiel warrants exploitation. If so, the materiel is acquired (usually purchased, but sometimes "found").

An exploitation plan is developed on the basis of inputs from consumers, AFMIC's analysts, the medical R&D community, and the three Surgeons General. The evaluation is carried out in one or more labs (DOD, Federal or civilian contract), none of which belong to AFMIC. The exploitation report is published and disseminated, often leading to further questions of interest to consumers. The most publicized materiel AFMIC has exploited to date includes over 200 samples associated with "Yellow Rain," a mycotoxin utilized as an unconventional warfare agent in Southeast Asia and Afghanistan.

Other FMME projects include synthetic casting material, individual CW (chemical warfare) defense kits, nerve agent antidotes, and aerosol bandages. Exploitation of foreign medical materiel not only provides insights in assessing a country's capabilities and policies, but also may result in the saving of U.S. R&D efforts.

## Support to the Navy

AFMIC is presently staffed with approximately 45 individuals. LT Sue Steven, MSC, and HMCM Jonnie Barnes are assigned as analysts sensitive to the Navy and Marine Corps' needs. The remaining personnel are

either active duty Army or Department of the Army civilians. Two Air Force officers came aboard last summer.

NAVMEDCOMINST 3830.1 describes ordering procedures and lists by title all AFMIC publications. Navy commands are encouraged to contact AFMIC to determine how their requirements (especially those not met by finished intelligence) can best be served. Conversely, Navy medical personnel abroad can make a significant contribution to the intelligence process by forwarding trip reports, port directory questionnaires, or other health and medical surveys to AFMIC.

## The Future

The future for AFMIC is one of expansion, both physically and in responsibilities. By 1985 a new building will be constructed to house the organization. In 1986 a computer will automate many of the functions presently performed manually by analysts and support personnel. This project is

being undertaken by the one-man Automation Management Division. Prior to moving into new facilities, AFMIC will continue to grow in manpower, taskings, and collection sources and will strengthen relationships with other intelligence agencies.

Efforts are underway to update and identify the Center's needs with the CIA, NSA, and branch intelligence offices in order that its mission will be even better supported by "all sources" data. AFMIC is establishing a list of medical indicators to be used by the Indications and Warnings personnel worldwide to help predict events of potential political and military significance. It is also developing a short course (3-5 days), to be taught at Fort Detrick, covering all aspects of the medical intelligence process pertinent to the medical planner.

The expansion of all these and other capabilities and your increased awareness of AFMIC's mission as a consumer, can only improve the service which ultimately supports the fighting forces. □

## How to Reach AFMIC

### By letter:

Director, AFMIC  
Building 362  
Fort Detrick  
Frederick, MD 21701

### By message:

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ZA//

### By phone:

Director's Office:  
Commercial: (301) 663-7511  
Autovon: 343-7511  
FTS: 935-7511

Navy Representatives:  
Commercial: (301) 663-7603  
Autovon: 343-7603  
FTS: 935-7603

**Tie-line from DC area:** 393-1839, extension 7511 or 7603

### By secure phone:

KY 2201, first call party desired on nonsecure line

# A Guide to Utilization Review Activities

LT Juanita Meredith, NC, USNR

During the past 2 years there has been a major emphasis on Navy medical facilities monitoring their utilization review (UR) activities. The Joint Commission on Accreditation of Hospitals (JCAH), Naval Medical Command, Inspector General, and the Department of Defense require a UR program.\* In fact, since 1966, JCAH has requested that all hospitals have such a program.\*\* The above regulatory agencies perform surveys and/or audits to insure compliance with requirements. This article should widen your scope on the subject of UR and be a guide to the implementation of a problem-focused, cost-effective quality control program.

What is utilization review? UR is a quality control method that focuses on patient care processes, medical resource allocation, and cost containment. Appropriate utilization of hospital resources has a direct impact on the Navy Medical Department's primary mission to treat active duty personnel and return them to duty in a timely manner. How is this requirement measured at your command? UR requirements state that activities must address the over and under utilization of acute care inpatient beds (length of stay days), proper scheduling of support services, therapeutic

and outpatient services, equipment and staffing problems, medical boards, leaves, transfers to Veterans' Administration hospitals, line of duty reports, and the medical holding company.

It is imperative that the program be physician-directed. The physician must be held responsible and accountable for effective and efficient utilization of medical resources. It is strongly suggested that the medical staff's by-laws of your command cite this essential physician activity. A physician-directed program will lend itself to a peer review process that fosters the practice of quality care. UR must also be an integral part of your quality assurance/risk management program.

UR activities should not focus solely on the discharging of patients, but must address patient needs. Premature discharging of patients may invite charges of negligence and/or lead to events requiring compensation. Whatever system you have tailored for your facility to assess medical resources, there must be continuous and timely monitoring of a representative sample of medical records, patients, and services. The review should include patients currently receiving care (concurrent review) and patients after discharge, (retrospective review). From this utilization review data, one can predict and plan a prospective use of medical resources such as: increases or decreases in clinic visits, operating beds, staffing needs, and revision of standard operating procedures and policies.

A problem-focused approach should be used to maintain cost-

effectiveness. The program must insure that admissions and continued stay are medically necessary and that medically indicated diagnostic procedures, consultations, and treatment are promptly initiated.

Ancillary support services, equipment, and staffing must also be monitored and analyzed for patterns and trends that affect utilization of medical resources. Timeliness of patient discharges or transfers to other facilities through early discharge planning must be monitored.

Quality of care issues and/or signal events under risk management noted during a medical record review, must also be addressed. Each medical facility should judge itself against other comparable military and civilian facilities.

UR *must* receive the full support of the command's medical and administrative personnel. Clinical departments, patient affairs, data, and social work departments all play key roles in its success.

## UR Program Components

An effective UR program has 10 major components: a UR plan, standard base criteria, a UR process, the use of retrieval and analysis data, a communication feedback loop, a committee or designees, a means of reporting the UR, education, patient-team conferences, and chart documentation.

**UR Plan.** The plan has the following critical elements:

- Purpose and objective
- Scope
- Authority

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\*BUMED Instruction 6320.62, Health Care Quality Assurance/Risk Management Program, 29 May 1981, chap 7 and JCAH Manual.

\*\*Porterfield JD: *Bulletin on the Joint Commission on Accreditation of Hospitals*, bulletin 41, March 1966.



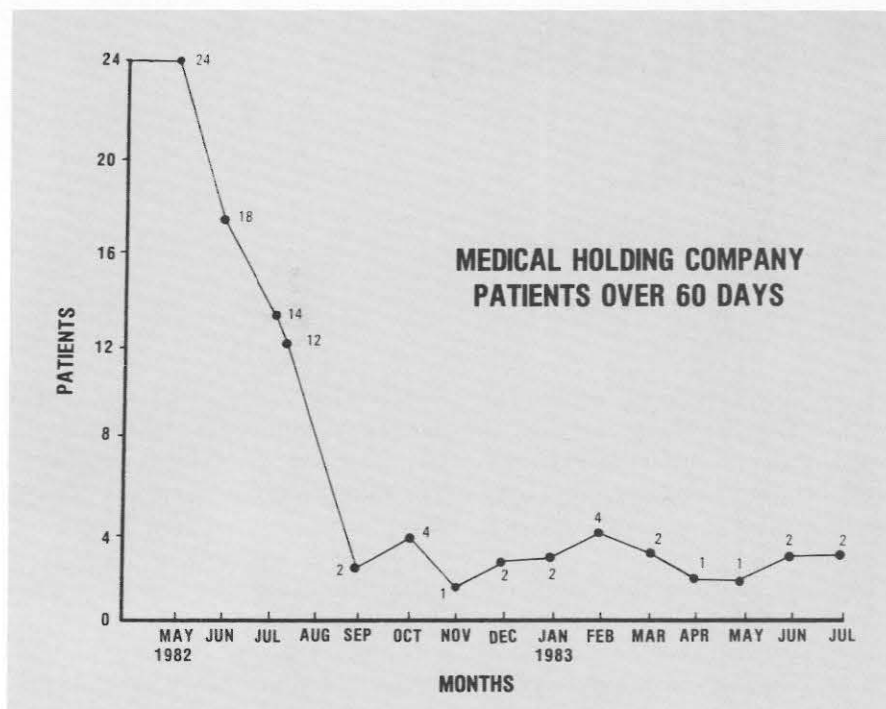


Figure 1

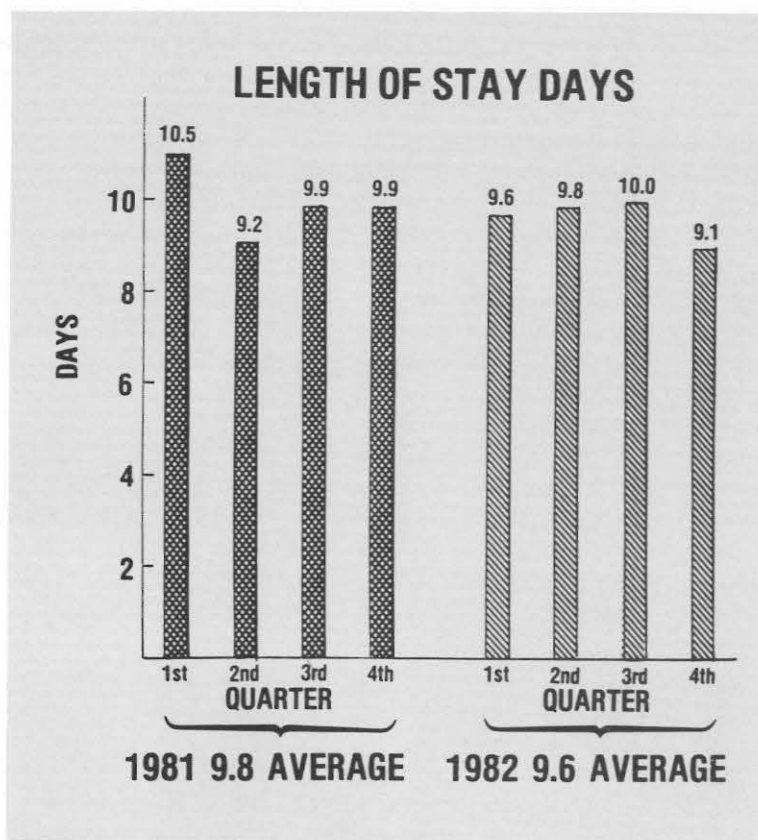


Figure 2

- Composition of committee or program
- Responsibilities
- Functions
- UR method
  - (1) Admission review
  - (2) Continued stay
  - (3) Discharge planning process
  - (4) Appeal
  - (5) Conflict of interest statement
  - (6) Ancillary support services
- Records and reports
- Meetings
- Procedural manual
- Program approval
- Evaluation program

**Standard Base Criteria.** Generic and specific criteria should be considered. There are several established criteria such as Professional Activity Study (PAS), Health Data Service (HDS), and Intensity of Service, Severity of Illness and Discharge Screening (ISD). All these may be used to monitor objective and evaluate the medical necessity and utilization of medical resources. The criteria you select must be approved by the medical staff and governing body. After using PAS, HDS, and ISD systems, I have found the ISD system to have both generic and body system specific criteria most practical for assessing utilization of medical resources and quality of care issues in large teaching facilities. The ISD system requires the reviewer to have a sound background in medical and nursing practice. This system can easily be adopted and/or adapted to suit your specific command population. Yet there is more to an effective UR program than criteria. Criteria provide an initial objective and an orderly mechanism for peer review. Professional clinical departments must continuously fine tune the specific criteria. Each department head should help develop and approve the standard criteria used for UR monitoring.

**UR Process.** Using a problem-focused approach, specific populations or clinical departments are selected for a 10-100 percent concur-

rent or retrospective review. Naval Hospital Bethesda's ISD cyclic review process is a 5-day program, approved by the commanding officer, medical staff, and Naval Medical Command. Some of the patients (oncology, psychiatry, rehabilitation), and special care cases are on a 14-day cycle. Alcohol rehabilitation patients are exempt from concurrent review until 42 days of hospitalization. All cases not meeting the established criteria are referred for peer review by a physician advisor after consulting the primary physician. If the physician advisor cannot identify the medical necessity or intensity of service, the physician advisor denies the continued stay and notifies the primary physician. The primary physician may agree or disagree to discharge the patient. If agreement is reached, the process is completed. If not, patients without medical justification for continued stay may reach the appeal stage. This could result with the disposition decision being made by the department head. UR's primary focus is on patient needs and is based on a continuing care model.

**Retrieval and Analysis Data.** Retrieval and analysis of statistical data are assessed for patterns and trends in some of the following areas:

- Length of stay days per month by major professional clinical departments (data service computer print-out).
- Fiscal year quarterly length of stay days by medical statistics of Navy medicine
- Surgical delay days
- Readmissions
- Discharge planning cases
- Transfer delays (Veterans' Administration hospitals or extended care facilities)
- Administrative delay days (medical boards, line of duty investigation reports, etc.)
- Over and under utilization of ancillary services (high and low volume)
- Major equipment problems
- Over 30 days inpatient cases per month

- Medical/casualty holding company utilization
- Staffing utilization
- Weekend admissions
- Air evacuation delays
- Estimated period of hospitalization days assigned
- Comparable military and civilian utilization statistics
- Admissions and discharges per month
- Authorized number operating beds

Some helpful data sources are UR activity statistics, uniform chart of accounts (UCA), computer census reports, admission and discharge logs, patient affairs department statistical data, medical records statistical data from national norms, or other comparative facility statistics.

#### Communication Feedback Loop.

UR material collected, analyzed, and acted upon must be shared, especially with the medical staff. The feedback will improve the quality of practice and aid in accomplishing appropriate utilization of medical resources. Charts, graphs, memoranda, and statistical reports to the involved clinical departments are worth their weight in

gold in obtaining positive UR attitudes. Statistical activities cited in Figures 1, 2, and 3 demonstrate patterns and trends that result when an effective internal quality control system exists.

**Committee or Designees.** UR committee or designees should represent the entire health team. The committee should have representatives from command administration, social work, nursing, patient affairs, quality assurance/risk management, and the medical staff. A legal advisor is optional. The physicians selected must be readily available for peer review consultation. A radiologist and pathologist should be considered due to their availability and neutral status. The physician members of the committee function as physician advisors to the UR coordinator. I have also found positive results in recommending physicians that use the medical resources inefficiently for committee membership. Participation motivates a change in attitude.

**Reporting UR.** Graphs, tables, pictures, and statistics all help to identify patterns and trends. Figure 4 demonstrates a comparative study of the

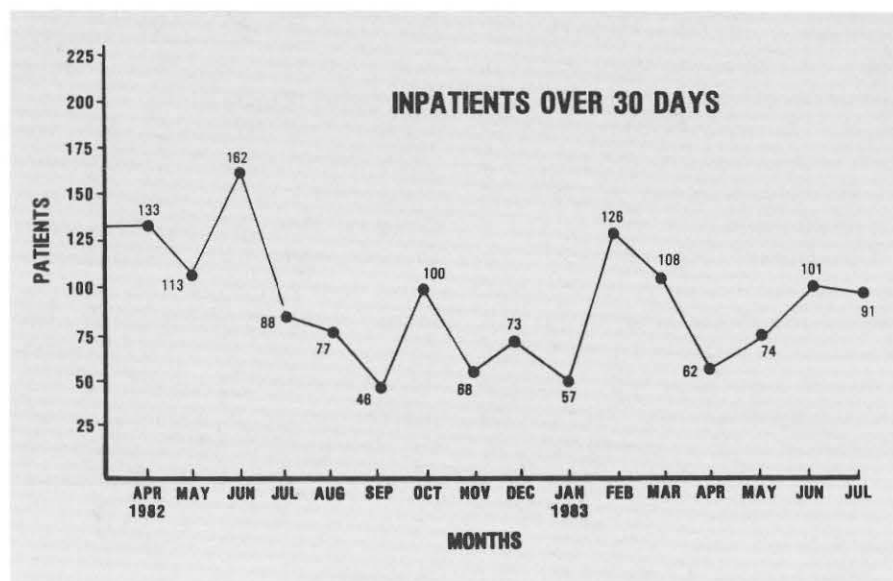


Figure 3



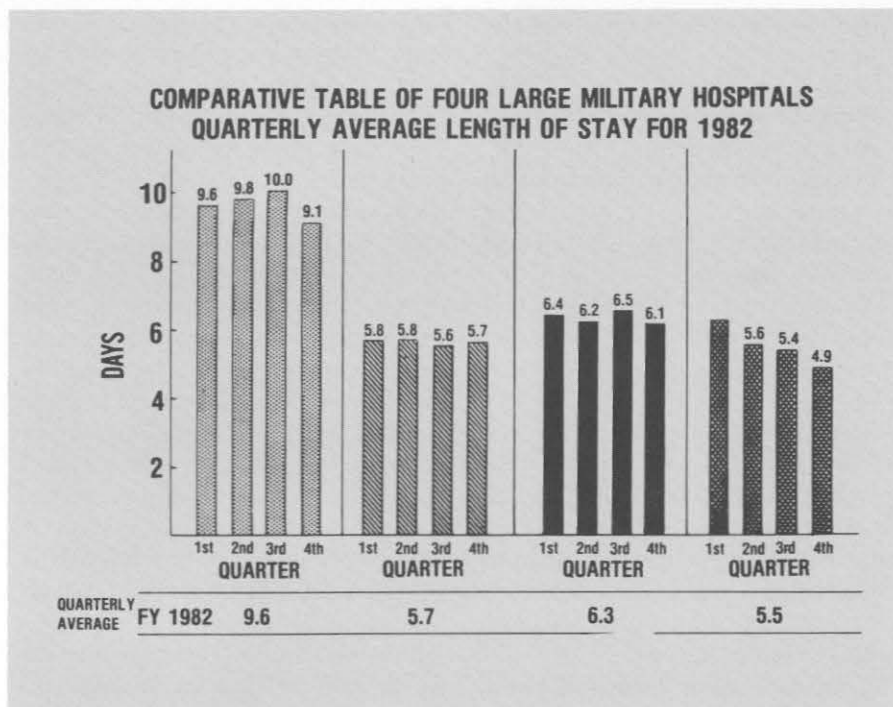


Figure 4

quarterly length of stay days for four major military facilities for FY82.

Figure 5 is a matrix of the Naval Hospital Bethesda's monthly length of stay days by professional clinical departments for FY82.

A monthly report must be maintained containing statistical findings, analysis of findings, trends and their significance, pertinent recommendations for action in areas requiring improvement, and appropriate followup. The results of UR monitoring must be used as *one of the bases* for a continued educational program for the health team.

**Education.** Each command orientation and staff training program should include the presentation of the UR process. This measure will foster support and compliance with command utilization guidelines. An ongoing orientation could be accomplished by a videotape. The effectiveness can be measured by the positive and negative results of UR data.

**Patient-Team Conferences.** The UR staff and health team members made up of nurses, physicians, social workers, rehabilitation therapists, and

chaplains foster vertical and horizontal communication of patient needs. It is the vehicle used at Naval Hospital Bethesda to insure early discharge planning and identification of problem cases not under concurrent UR. Documentation also aids the health team in a continued dialogue and provides a continuing care approach. Early discharge planning is considered with all patients using the continuing care model (Figure 6).

**Chart Documentation.** All cases under review should have a UR entry documented in the health records (Progress Notes SF-509). This serves to communicate to the health team the latest UR and discharge planning status. An example of such an entry may be written as: **UTILIZATION REVIEW DISCHARGE PLANNING** Message forwarded for Veterans' Administration Hospital transfer 10 August 1983, awaiting acceptance.

## Summary

An aggressive UR program will improve quality of care, decrease length of stay days, and reduce medi-

cal care cost. The program guide described is fully operational at Naval Hospital Bethesda. The problems addressed such as length of stay delay days and inefficient scheduling seldom require more than a conversation between the primary physician and physician advisor or utilization review specialist for resolution.

UR monitoring is a quality control activity and must be integrated with quality assurance/risk management. Effective and efficient utilization of medical care resources, as well as quality of care, is a primary concern of the Navy Medical Department and should be fully operational in all military medical facilities. Samples of the UR plan, forms, tables, charts, and graphs used at Naval Hospital Bethesda are available upon written request to: Utilization Review Officer, Naval Hospital, Bethesda, MD 20814. The key to a military medical facility's UR program is the integration of quality assurance/risk management and a communication link with practitioners to convert quality assessment findings to quality assurance.

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**UTILIZATION REVIEW DATA MATRIX**  
Discharge Inpatient Average Length of Stay Days by Professional Services

Services	Jan 82	Feb 82	Mar 82	Apr 82	May 82	Jun 82	Jul 82	Aug 82	Sep 82	Oct 82	Nov 82	Dec 82
General Surgery	8.37	7.31	7.43	6.81	8.86	7.11	9.02	7.60	11.12	6.88	8.00	7.16
CardioThoracic	11.79	14.30	14.24	16.27	24.76	20.28	14.23	15.02	18.63	14.45	15.04	19.20
Internal Med/Care Surgery	25.75	29.66	32.37	4.66	15.50	23.83	37.14	3.00	19.57	12.00	15.25	11.60
Neurosurgery	25.64	22.48	20.42	26.88	19.98	15.68	21.21	19.13	15.17	15.50	12.00	13.94
Ophthalmology	9.78	8.56	6.75	9.59	7.25	8.41	16.36	9.72	9.82	5.78	8.00	5.81
Oral Surgery	5.87	6.22	9.00	3.00	4.09	3.87	4.11	2.00	4.12	3.22	3.14	3.83
Otolaryngology	4.82	5.01	4.47	5.79	6.84	7.31	3.59	3.00	2.41	4.29	3.00	2.84
Pediatric Surgery	4.00	1.00	2.25	1.00	1.75	4.75	1.71	1.36	2.00	3.85	1.80	4.50
Plastic Surgery	5.88	5.88	5.12	5.00	6.00	9.24	8.83	5.40	4.14	5.95	5.00	6.84
Urology	4.28	7.20	6.30	4.57	4.82	5.22	4.88	5.67	3.74	3.00	3.00	3.22
GYN	5.52	4.08	4.88	5.10	5.56	4.29	7.72	6.18	5.68	3.96	4.00	5.30
OBS	3.72	3.95	3.54	4.21	4.42	5.47	3.48	3.61	4.12	3.73	4.67	4.06
Pediatrics	6.83	6.37	6.10	9.65	7.86	6.61	6.60	7.30	7.02	5.56	5.64	7.11
Nursery	3.30	6.01	5.21	4.08	4.80	2.92	3.01	4.27	3.22	3.19	3.03	3.38
Orthopedics	21.59	13.56	16.86	22.17	14.63	13.81	11.07	10.27	10.27	6.39	12.00	11.68
Podiatry	2.14	2.33	2.36	2.70	3.00	2.20	2.83	1.50	2.72	7.14	1.66	6.42
Psychiatry	48.72	36.20	31.20	44.13	52.70	38.21	50.50	33.17	41.80	29.77	16.29	13.07
Trisarf	2.65	4.44	4.33	5.83	3.83	8.50	1.08	3.09	6.25	15.62	36.00	38.03
Internal Med	9.18	12.41	14.18	10.13	8.03	9.73	10.60	14.05	11.94	9.58	11.13	9.23
Cardiology	4.66	5.00	6.00	9.27	4.57	5.20	6.53	9.44	13.82	8.07	5.00	2.25
CCU	10.31	10.15	7.78	10.89	6.55	8.44	4.09	7.50	3.43	6.11	4.58	7.10
Dermatology	10.33	10.33	18.75	20.00	6.00	4.00	10.00	1.50	26.00	12.00	5.50	14.25

**Figure 5**

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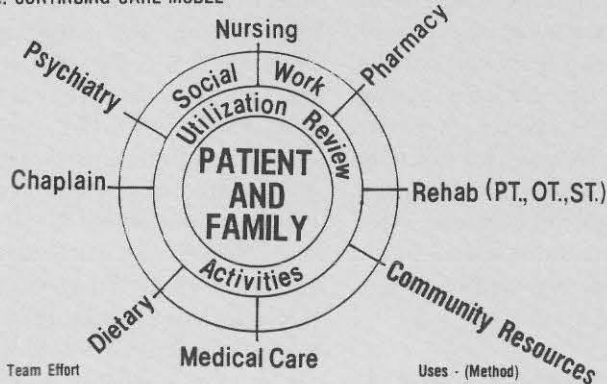
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### UTILIZATION REVIEW DISCHARGE PLANNING MODEL

Structure: CONTINUING CARE MODEL



PROCESS: Team Effort

1. Continuing care - assessed initially on admission by physicians and/or nurses.
2. Monitored weekly by the Utilization Review Staff via Patient Team Conferences for appropriate and timely referrals.
3. Social Work Service initiates the community resource referrals and documents the patient status.

Outcome:

- Timely placement and discharge
- Continuity of care
- Reduction in length of stay (Patient census report)
- Timely and comprehensive completion of intra-agency transfer form

Uses - (Method)

- (M) - Medication
- (E) - Environment
- (T) - Treatment
- (H) - Health Teaching
- (D) - Outpatient Referrals
- (D) - Diet

**Figure 6**



# Portable Radio-Cassette Players, Stereo Earphones, and Hearing Loss

CDR Arnold E. Katz, MC, USNR-R  
Robert M. Katz  
CAPT Vincent Pattavina, MC, USNR

Because noise-induced hearing loss in Navy personnel has been recognized as a serious health problem, hearing conservation programs have been established.<sup>(1)</sup> Strict compliance with these programs is required to prevent hearing loss in individuals and limit monetary claims against the Government through hearing loss claims.<sup>(2)</sup>

It is now well established that the two factors causing noise-induced hearing loss are loudness (intensity) of the sound and duration of exposure. Moreover, hearing nerve cell damage (hearing loss) is not restricted to situations where individuals are exposed to excessive levels of noise for extended periods of time. Speech and music are organized sounds, yet excessive exposure even to pleasurable sounds at too great an intensity can lead to permanent hearing loss.

## Loudness (Intensity of Sound)

A sound level meter is an instrument designed to record what it hears in terms of decibels (dB). A soft

whisper measures about 30 dB, while a subway train creates 90 dB of noise. A pneumatic drill averages about 100 dB and a gunshot blast is about as loud as a jet plane at 140 dB. Sounds at this level may actually cause pain, yet hearing loss can be caused by sounds much softer than 140 dB.

The sound level meter, basically an electromechanical ear, is usually composed of four different networks or scales. The A scale was designed to approximate the response of the human ear; it is the scale specified in the Occupational Safety and Health Act (OSHA). OSHA presently requires that hearing conservation programs be instituted when noise exposures are above 85 dB on the A scale (dBA).<sup>(3)</sup> Furthermore, the Environmental Protection Agency has established that by 1983 the maximum noise levels for new buses must not exceed 77 dBA at 50 feet and 80 dBA inside at the noisiest seat location.<sup>(4)</sup> There is an increasing awareness that the harmful effects of noise are not just limited to the ears,<sup>(5)</sup> and major efforts are being expended to protect the public.

## Duration of Exposure

The length of time a person is exposed to a sound also determines how much of a hearing loss will occur. The louder the sound, the less time it



takes to cause a hearing loss. OSHA has established guidelines that prohibit exposing employees to 90 dBA for 8 hours a day. As the sound intensity increases by 5 dBA, the safe period of exposure is reduced by half. For example, employees should not be exposed to 95 dBA for greater than 4 hours per day; 100 dBA for greater than 2 hours per day; 105 dBA for greater than 1 hour per day, etc. No exposure to continuous sound above 115 dBA is allowed.

## Portable Radio-Cassette Players with Stereo Earphones

Since 1979 portable radio-cassette players with stereo earphones have achieved considerable popularity. They are comfortable and light weight, and the quality of the sound produced by these units is so pleasing

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that they are frequently worn for hours at a time. Because they are portable, the ears are exposed without even the normal interruptions that would accompany listening to music from a fixed source. It is not uncommon to see children listening to these units as they play, parking lot attendants listening while they work, and commuters using them while they travel.

Their loudness or intensity is also truly remarkable. On the units that have volume settings from one to ten, the loudness varies from 93-108 dBA at volume setting number four. At volume setting eight the loudness is predominantly in excess of 115 dBA.(6) Table I summarizes the mean range of values of three such units tested at various volume settings and the suggested maximum daily time of exposure to these levels. In general, one should listen to these units at volume setting three or below, and they should never be used at volume setting eight or above. Their use should be severely limited at volume settings four through seven.

### Additional Hazards

In addition to hearing loss that can result from excessive exposure to portable radio-cassette players, their use poses other hazards. They are quite isolating and can easily drown out some of the warning signals of everyday life. It is extremely dangerous to use them while driving a car, jogging, or bicycle-riding.

In Massachusetts a 13-year-old boy riding a bicycle while wearing radio earphones was killed when he collided with a van. A policeman at the scene reported that the accident occurred because the boy did not hear the oncoming traffic. In Toronto a 17-year-old youth was killed by an approaching train while wearing earphones. A young woman in Chicago wearing a personal stereo headset was killed by a car while crossing a city street. In separate incidents, train accidents killed two Pennsylvania residents. Both men were wearing headsets.

**TABLE 1. Range of Intensity of Portable Units with Stereo Earphones and Suggested Maximum Daily Time of Exposure**

Volume Setting	Mean Range of Intensity (dBA)	Suggested Maximum Daily Time of Exposure
1	73- 82	unlimited
2	84- 91	8 hours
3	88- 96	4 hours
4	96-102	2 hours
5	101-108	1 hour
6	103-109	30 minutes
7	110-118	15 minutes
8	114-123	none
9	117-124	none
10	116-125	none

The township of Woodbridge, NJ, has legislated severe restrictions on the use of portable units by drivers of all motorized vehicles, and by bicyclists and pedestrians when they cross township streets. California, Florida, Georgia, Massachusetts, Minnesota, Pennsylvania, Virginia, and Washington have banned the use of headphone sets in motor vehicles. New York City, Philadelphia, Chicago, Newport, RI, and Rahway, NJ, are considering or have already adopted laws similar to the Woodbridge ban.

The Navy Safety Center in Newport has warned that stereo earphones may be unsafe aboard ship not only because they could cause accidents, but also because their use could provide an enemy with targeting information. The Center's officials have not actually prohibited shipboard use of headphones but have warned of these dangers with an advisory.

### Summary

Hearing loss in young people exposed to loud music is well docu-

mented.(7) Portable radio-cassette players with stereo earphones are capable of delivering excessive sound intensity for extended periods and are extremely isolating. They should be enjoyed cautiously. It would be a sad commentary if advances in technology that allow us to reproduce music so beautifully actually contribute to the impairment of the hearing and/or safety of our personnel and their dependents.

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# Dental Emergency: An Intraoral Incision and Drainage Technique for Nondental Personnel

CAPT D.D. Antrim, DC, USN

One of the most frequent debilitating conditions is the acute toothache. This malady should be treated by an experienced dentist in a suitable facility. There are times, however, when a dental emergency occurs and circumstances dictate that treatment be rendered by nondental personnel. One procedure that can be performed by the physician or independent duty

corpsman is incision and drainage of an acute apical abscess.

Incision and drainage is the act of cutting an opening into soft tissue through which accumulated fluid and discharges from a wound, sore, or abscess can drain.<sup>(1)</sup> This is relatively innocuous but one of the most misunderstood forms of emergency treatment.

This article will aid the independent duty corpsman, physician, or nondental personnel in performing an incision and drainage of the intraoral abscess.

## Indications

Incision and drainage is necessary to evacuate purulent or hemorrhagic exudate that has accumulated in the soft tissues. This eliminates or at least diminishes discomfort caused by pressure of fluids in the soft tissues and thereby facilitates healing. The condition that necessitates incision and drainage is an extension of an acute alveolar abscess that occurs in the alveolar process, usually as a result of a degeneration of the pulp in the root canals of one or more teeth. The necrotic tissue within the root canal acts as a reservoir for bacteria and toxins. The continued inoculation of the periapical tissue with this noxious stimuli eventually results in an inflammatory response with a buildup of exudate. The condition typically goes through two stages before incision and drainage is possible.

Initially, the inflammatory exudate is localized to the apex of the tooth. In

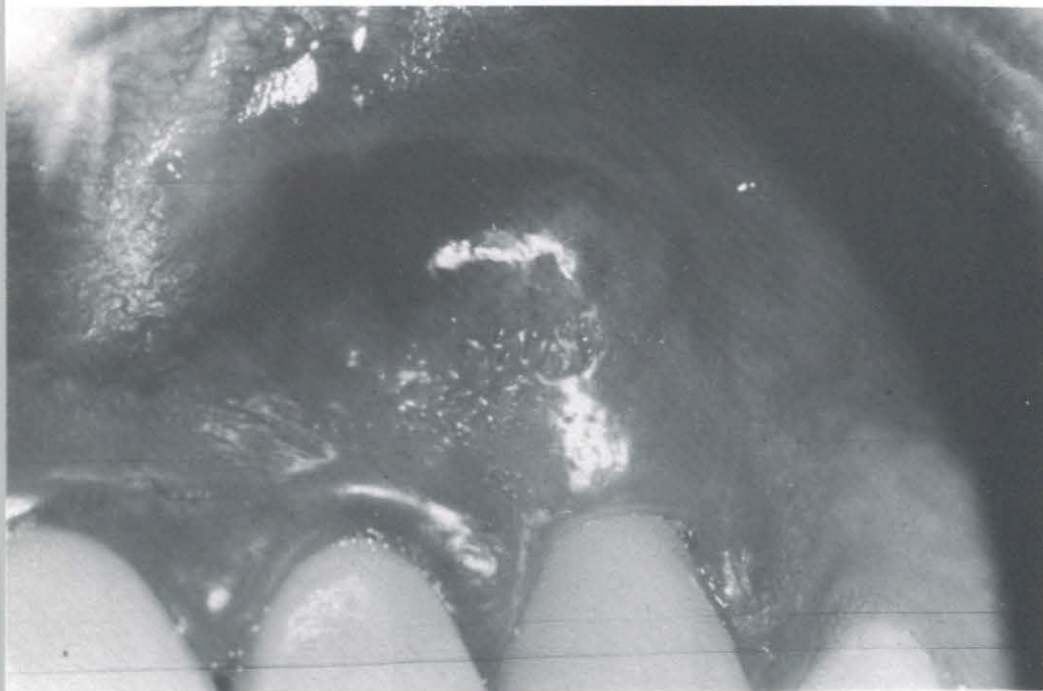


Figure 1. Localized subperiosteal abscess.

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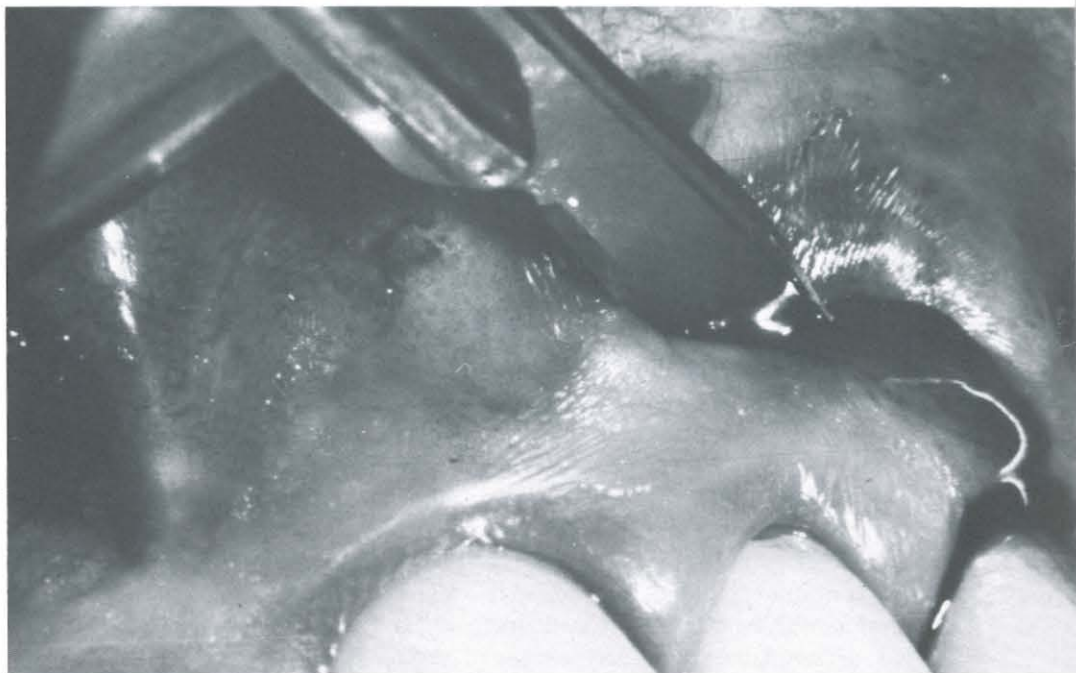


this stage the patient will have spontaneous pain caused by the increasing pressure. The tooth will be tender to tapping and biting and nonresponsive to the electric pulp tester. Radiographically, the area may appear normal, exhibit a slightly widened periodontal ligament, or show evidence of a previous chronic periapical lesion. At this point, the preferred treatment is to establish drainage through the tooth. This should be done by a dental officer.

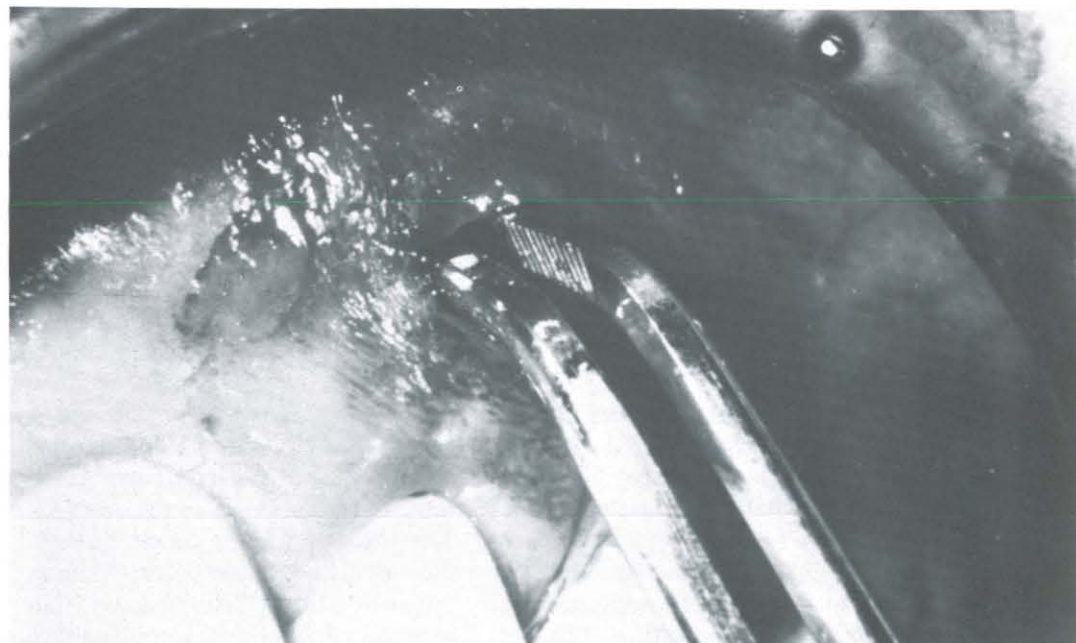
If the acute apical abscess is not treated at this stage, the periapical inflammation will continue. Further disintegration of surrounding tissue results in liquefaction and formation of thick, viscous, purulent exudate (pus) that accumulates in the area surrounding the root apex. As the fluid pressure increases, the exudate forces its way through the cancellous (medullary) bone, taking the path of least resistance. As the fluid accumulates and pressure builds, the condition generally worsens, and the patient experiences severe pain and systemic symptoms. The symptoms may include fever, chills, and/or general malaise. This patient should be placed in the hands of qualified dental personnel as soon as possible.

If the patient endures the first two stages of abscess formation without seeking help, the intrabony pressure and inflammatory process will eventually cause a perforation of the cortical plate. The exudate breaking through the cortical plate is then contained by the periosteum. The exudate causes a stripping of the periosteum from the bone and thus a localization of the accumulated pus between the bone and the periosteum. This is called a subperiosteal abscess (Figure 1). It is at this stage that incision and drainage is indicated.

The localized subperiosteal abscess is usually accompanied by intense



*Figure 2. Stab incision at "pointed" area of swelling.*



*Figure 3. Loosening tissue with beaks of a hemostat.*

pain because the pressure of the exudate causes a distension of the soft tissue. Incision and drainage of the area will usually cause an immediate release of pressure and instantaneous relief. Release of the purulent or hemorrhagic exudate should facilitate a return to an asymptomatic, chronic situation that can be dealt with once a dental officer is available.

A decision must be made as to when to perform the incision and drainage procedure. This is not an easy decision to make. Ideally, the immediate area to be incised, the "pointed" area, should feel soft and fluctuant to tender palpation. The "pointed" apex of the swelling may appear whitish, yellowish, or at times purplish.<sup>(2)</sup> This is the ideal time to anesthetize, incise, and drain. You would expect to see a flow of pus and broken-down blood products. In the early stage of formation of the subperiosteal abscess, however, the lesion is often indurated or very hard, and pain can be severe. If the lesion has not "pointed," incision may produce only hemorrhage since no pus has accumulated. You may choose, therefore, to place the patient on hot intraoral saline rinses (half a teaspoon salt in a glass of warm-to-hot water) every half hour until the abscess points. Adjunct therapy would be suitable analgesics. Systemic antibiotics are not indicated if the situation remains localized. If the swelling shows signs of developing into a cellulitis or the patient develops systemic symptoms, such as fever or general malaise, an appropriate antibiotic should be prescribed. Penicillin is the drug of choice in odontogenic infections.<sup>(3)</sup>

## Technique

Once the decision has been made to proceed with incision and drainage, the following steps should be taken:

(1) **Anesthetize the patient.** Anesthesia may be difficult to obtain in an acutely inflamed and abscessed area. Often there is some reluctance to inject into an area of infection. The best approach would be block anesthesia; however, nondental personnel may

not be familiar with suitable techniques for administering block anesthesia in the oral cavity. An alternative approach would be to use infiltration around the periphery of the localized soft tissue swelling. There are several reasons why this might have limited success, such as local pH conditions, dilution of the anesthetic solution, and rapid absorption in a highly inflamed area, but it is the recommended procedure in most cases. It has been suggested that a localized application of a tissue-freezing solution, such as ethyl chloride, can be used at the exact spot you wish to incise. This might numb the surface of the tissue momentarily, but usually it will not give adequate depth of anesthesia.

(2) **Prepare the patient.** The patient should be informed in general terms about what the procedure involves. Explain that you are going to incise or lance the abscessed area. Be careful not to frighten the patient with descriptive terms, such as "cut," that impart a negative connotation. Explain that there may be one brief moment when he will feel uncomfortable but it will pass very quickly. Isolate the area with 2 by 2-inch gauze pads, if possible, and have an assistant ready with a suction apparatus to catch the expected flow of exudate.

(3) **Incise the area.** In spite of all attempts at anesthesia, there usually is a moment of pain when the incision is made. The incision should be done deftly with speed and as much care as possible. A No. 15 or No. 11 scalpel blade is used to lance the tissue at the most distended point of the swelling. The blade should be thrust through the soft tissue all the way to bone in one swift motion, described as a "stab incision" (Figure 2).<sup>(4)</sup> If the drainage is productive, the patient usually is greatly relieved. The drainage com-

monly consists of a spurt of pus, followed by a flow of pus and blood mixture. After a short period the flow will be comprised mostly of blood and active drainage will stop. This usually takes 5-10 minutes. Once active flow has stopped, gently "milk" the involved area to force any residual exudate out of the incision.

(4) **Place a drain.** After the initial traumatic moment, it is advisable to infiltrate more anesthetic solution in and around the swollen area. The incision may be widened and extended to

Figure 4A and Figure 4B. Placing the rubber drain with hemostats. Figure 4C. Drain in place. Figure 4D. Holding drain in place with a single suture.



Figure 4A



Figure 4B

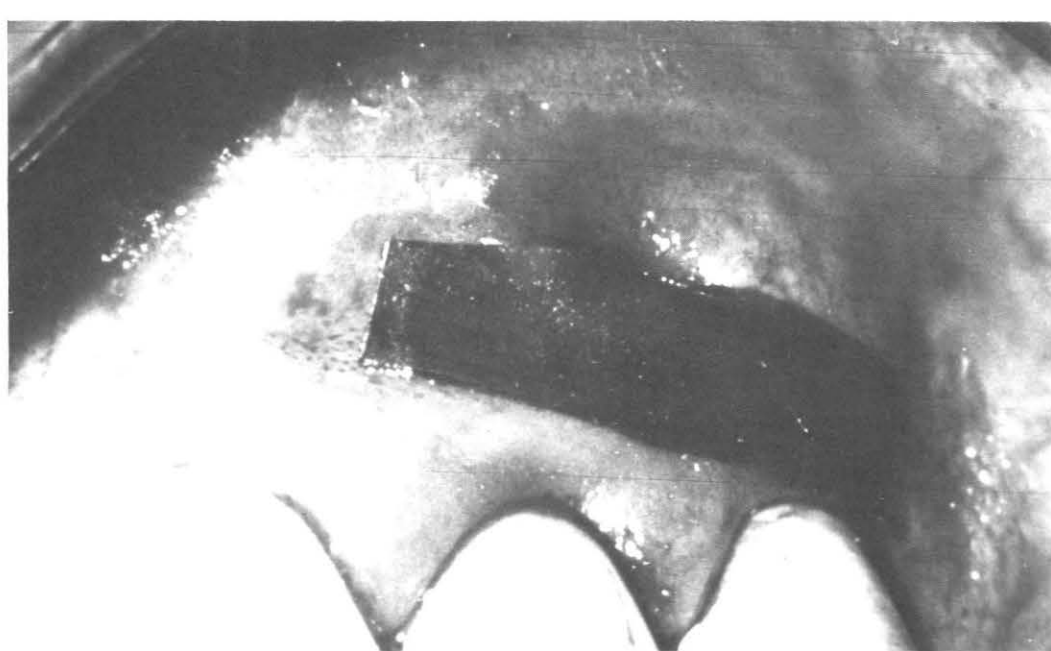


Figure 4C

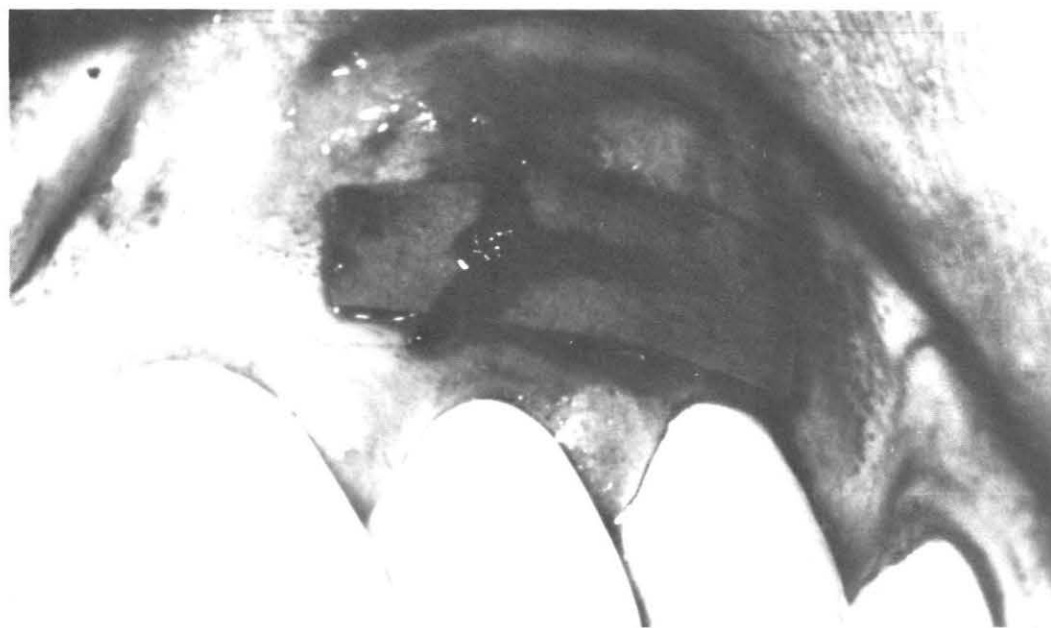
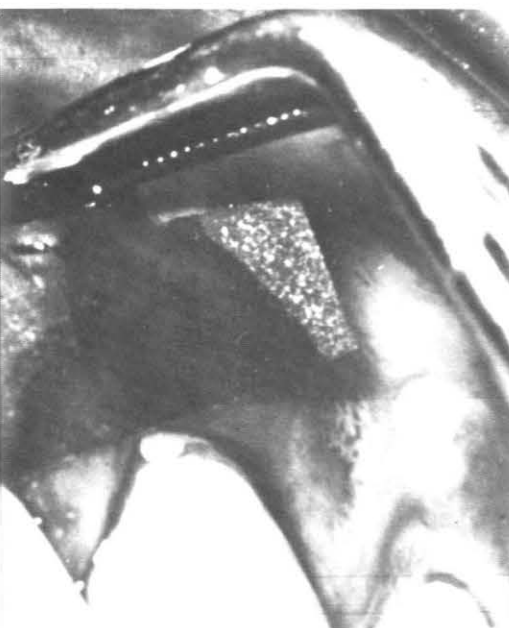


Figure 4D

the bony perforation using the beaks of a hemostat (Figure 3). This insures an avenue to the abscessed area and loosens the tissue sufficiently so that a rubber drain can be placed. The drain can be made from a rubber glove or Penrose drain. It should be cut in an "H" or "T" shape and tied down with a single suture if necessary. Placement of the drain is illustrated in Figure 4A, B, C, and D.

(5) **Postoperative care.** The drainage of accumulated exudate usually provides dramatic relief and greatly

aids in the treatment of the acute situation. If the patient has been placed on antibiotics, he should maintain coverage for a minimum of 7 days or for 4 days following cessation of acute symptoms or systemic manifestations. The drain usually can be removed after 48 hours.

### Conclusion

It is important for the physician or corpsman to realize that the initial cause of the problem still exists. Until the necrotic debris can be removed

from the root canal space of the tooth, it is likely the condition will recur. The patient should be referred to the nearest dental facility as early as possible.

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3. Ingle JI, Beveridge EE: *Endodontics*, ed 2. Philadelphia, Lea & Febiger, 1976, p 586.
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# Hospital Corpsmen/Dental Technicians Update

• **NEC Manual Changes.** Recent changes to the *NEC Manual* (NAVPERS 18068D) will revise titles, descriptions, and pay grade restrictions for HM and DT NEC's. Revisions were initiated to better describe the actual duties, state of the art, and levels of capability for subject NEC's.

**Title Changes:**

HM-8407 Radiation Health Technician  
HM-8485 Psychiatric Technician  
HM-8505 Cytology Technician  
HM-8541 Respiratory Therapy Technician

**Title and Description Changes:**

DT-8703 Dental Administrative Technician  
DT-8714 Dental Research Assistant

**Description Changes:**

HM-8451 Basic, X-Ray Technician  
HM-8452 Advanced, X-Ray Technician  
DT-8732 Dental Equipment Repair Technician  
DT-8752 Dental Laboratory Technician, Basic  
DT-8753 Dental Laboratory Technician, Advanced  
DT-8765 Dental Laboratory Technician, Maxillofacial

**Pay Grade Restriction Changes:**

HM-8478 Advanced Biomedical Equipment Technician (Raised pay grade level to E-8)

• **Retention.** HM retention increased from 58.2 percent in FY82 to 68.3 percent in FY83. DT retention increased from 52.9 percent in FY82 to 66.7 percent in FY83. The first quarter of FY84 reflects 70 percentile retention for both the HM and DT communities. Refer to NAVMEDCOMINST 1000.1 (Project REEP, Retain Each Eligible Person) for procedures for continuing retention efforts. Congratulations to all command retention teams for a job well done.

• **Medical Enlisted Commissioning Program.** Program Authorization 116A of 25 Oct 1983 authorized the Medical Enlisted Commissioning Program (MECP). The MECP affords Medical Department enlisted personnel (HM/DT's) an opportunity to complete the requirements for a baccalaureate degree in nursing and earn a commission as an ensign, USNR, in the Nurse Corps. COMNAVMECOM MSG

271730Z Oct 1983 announced the MECP, listed qualifications, and outlined application procedures. The FY84 MECP selection board convened at NMPC on 21 Feb 1984 to review applications and select candidates for training. An annual COMNAVMECOM Notice will be published to announce application information and dates commencing with the FY85 solicitation for applications. A MILPERSMAN article will be forthcoming to outline MECP qualifications and application procedures similar to other Navy programs.

• **Inservice Training Instruction.** Inservice training for hospital corpsmen and dental technicians (NAVMEDCOMINST 1510.2) will be promulgated in the Spring of 1984. The primary objectives of this forthcoming instruction are to insure the operational/contingency readiness of HM and DT personnel and support advancement in rate opportunities. Enclosures to NAVMEDCOMINST 1510.2 are: recommended training objectives, resource materials, and a bibliography for the inservice training program. Inservice training will be defined as "An organized, scheduled, mandatory program conducted within a command during normal working hours for the purpose of providing hospital corpsmen and dental technicians of all rates with professional and technical information necessary to enhance their job performance and advancement in rate opportunities."

• **Navy Occupational Task Analysis Program (NOTAP).** In April 1984 a NOTAP survey and analysis of the HM and DT ratings will be conducted by the Navy Occupational Development and Analysis Center (NODAC) in accordance with MILPERSMAN article 1450100. Upon completion of the survey, data obtained and analyzed will be used to update occupational standards, Personal Advancement Requirements (PAR's), rate training manuals, training curricula, and rating advancement examinations. Areas with the greatest concentration and cross section of HM's and DT's by population will be surveyed by personal interviews and survey instruments. This includes naval hospitals, medical clinics, dental clinics, ships, and FMF units. Your full cooperation and assistance are key elements to the success of this survey. The Hospital Corps Plans Officer (MEDCOM-5415) and the Dental Technician Plans Officer (MEDCOM-5416) will serve as the Naval Medical Command technical advisors and points of contact for this program.

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—Prepared by NAVMEDCOM (MEDCOM-05)



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## In Memoriam

RADM *James L. Holland*, MC (Ret.), former commanding officer of the Naval Aviation Medical Center, Pensacola, FL, died on 29 Dec 1983 in Pensacola. He was 79.

A native of Meridian, MS, Dr. Holland graduated from the University of Mississippi and then from the Medical School of Vanderbilt University in 1930. He joined the Navy that same year, served his internship at Naval Hospital Portsmouth, VA, and from 1931 to 1933 was assigned to the Norfolk Navy Yard. For the next 2 years he saw duty with the Civilian Conservation Corps.

Dr. Holland joined the Asiatic Fleet in 1935 aboard USS *Guam* on Yangtze Patrol. He then served on several other vessels and at the Cavite Navy Yard in the Philippines.



RADM Holland



RADM Swanson

During World War II Dr. Holland served aboard several vessels in the Pacific Campaign, became a flight surgeon in 1943, and then was senior medical officer aboard USS *Essex* when that carrier supported the Marianas invasion and participated in the first air raids on Iwo Jima, the first and second Battles of the Philippine Sea, Palau, Luzon, South China Sea Campaign, and the Invasion of Okinawa.

Dr. Holland subsequently served at the Bureau of Medicine and Surgery in Washington, DC, from 1945 to 1949, NAS Pensacola, and NAS Jacksonville.

He served subsequent tours at BUMED, NAS Pensacola and, in 1956, joined the staff of Commander Naval Air Force, U.S. Pacific Fleet. In 1959 he became

the first admiral in the Medical Corps to command the Naval Aviation Medical Center, Pensacola.

After several other tours ashore and afloat, Dr. Holland returned to Pensacola again as commanding officer of the Naval Aviation Medical Center, Pensacola. He retired in 1966.

RADM *Clifford A. Swanson*, MC (Ret.), Surgeon General of the Navy from 1946 to 1951, died at Bethesda Naval Hospital 27 Jan 1984 after suffering a heart attack.

Born in Marquette, MI, on 8 June 1901, Dr. Swanson graduated from Northern State Teachers College in 1921, received his M.D. degree from the Medical School of the University of Michigan in 1925, and was appointed assistant surgeon in the Navy the same year. He served in many assignments throughout the United States, abroad, and aboard ship. In 1935 he circumnavigated the globe, "414 years," as he said, "after Magellan."

Dr. Swanson observed diseases of the eye in the Orient and, while instructor at the Naval Medical School, did research on night and color vision and the effect of pressure and oxygen consumption on the eye. This work was of great value in both aviation and submarine medicine.

He served as physician to two Secretaries of the Navy, Claude A. Swanson and Frank Knox. During World War II he was senior medical officer on the Battleship *Iowa* and also served on the staff of Commander, Battleships, Atlantic Fleet.

In 1944, while an operating surgeon at the Bethesda Naval Hospital, he became known for performing the delicate and highly specialized fenestration operation for the relief of certain types of otosclerosis.

He accompanied President Franklin Roosevelt to the Tehran Conference, represented the United States at the Pan American Eye Conference, and was designated the medical officer to accompany the congressional committee that inspected the Pacific War theater.

Dr. Swanson became Surgeon General 1 Dec 1946, serving in that office until 27 Jan 1951. He sponsored legislation that made the Nurse Corps a permanent staff corps, established the Medical Service Corps, and gave doctors added inducements to pursue careers in the Navy. He retired from the Navy in July 1955.



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